

## Chapter 3 Rocks

**Section 3.4 Metamorphic Rocks**

*This section discusses the formation and classification of metamorphic rocks.*

**Reading Strategy**

**Outlining** This outline is a continuation of the outline from Section 3.3. Complete it as you read. Include points about how each of these rocks forms, some of the characteristics of each rock type, and some examples of each. For more information on this Reading Strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook.

## III. Metamorphic Rocks

## A. Foliated Rocks

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

## B. Nonfoliated Rocks

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_


1. Is the following sentence true or false? Metamorphism means "a change in form." \_\_\_\_\_

**Formation of Metamorphic Rocks**

*Match each description to its term. The terms will be used more than once.*

| Description                                   | Term  |
|---|---|
| _____ 2. takes place when magma intrudes rock | a. contact metamorphism<br>b. regional metamorphism |
| _____ 3. produces high-grade metamorphism     |   |
| _____ 4. produces low-grade metamorphism      |   |
| _____ 5. changes in rock are minor            |   |
| _____ 6. results in large-scale deformation   |   |
| _____ 7. forms marble                         |   |
| _____ 8. occurs during mountain building      |   |

**Chapter 3 Rocks****Agents of Metamorphism**

9.  The agents of metamorphism are \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ solutions.
10. Is the following sentence true or false? During metamorphism, rocks are usually subjected to one agent at a time.  
\_\_\_\_\_
11. Complete the table below.

| Agents of Metamorphism |        |
|------------------------|--------|
| Cause                  | Effect |
| Heat                   |        |
| Pressure               |        |
| Reactions in solution  |        |

**Classification of Metamorphic Rocks**

12. Circle the letter of each sentence that is true about foliated metamorphic rocks.
- It is rock with a layered or banded appearance.
  - Pressure can form it.
  - Gneiss and marble are examples of it.
  - Schist is an example of it.
13. Circle the letter of each sentence that is true about nonfoliated metamorphic rocks.
- It is a metamorphic rock that does not have a banded texture.
  - Most of it contains several different types of minerals.
  - Marble is an example of it.
  - Quartzite and anthracite are examples of it.